

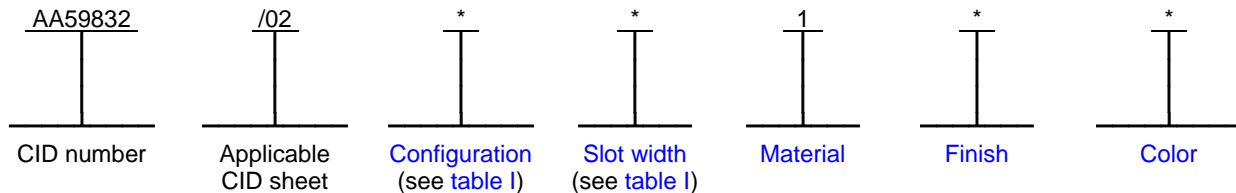
COMMERCIAL ITEM DESCRIPTION
SPECIFICATION SHEET

EXTRACTOR, ELECTRICAL CARD, METAL, NON LOCKING,
SINGLE ACTION, FOR "U" CHANNEL ACTUATING SURFACES,
FOR .032, .063, .094, AND .125 INCH THICK CIRCUIT CARD ASSEMBLIES

The General Services Administration has authorized the use of this
commercial item description for all federal agencies.

The complete requirements for procuring extractors described herein shall consist of this document and the latest
issue in effect of [A-A-59832](#).

CLASSIFICATION/PART IDENTIFICATION NUMBER (PIN). This commercial item description (CID) specification
sheet uses a classification system which is included in the Part Identification Number (PIN) as shown in the following
example (see [NOTES](#) herein).



Example: AA59832/02MS1AB is the PIN for a medium length aluminum extractor designed for mounting on a circuit
card assembly with a printed board thickness of .063 inch (1.60 mm) in width. The corrosion protection finish applied
to the extractor is black anodize.

SALIENT CHARACTERISTICS.

Performance. Extractors shall be capable of injecting and removing the circuit card assembly from its installed
position.

Interface and physical dimensions. The extractors supplied to this CID specification sheet shall be as specified
herein and meet the general requirements specified in CID [A-A-59832](#).

Configuration. The configuration of a extractor shall be as specified in [table I](#). The details of a particular
configuration consist of those on figures [1](#), [2](#), and [3](#).

Slot width. The available slot widths needed to accommodate various printed board thicknesses for the extractors
covered by this CID specification sheet are specified in [table I](#).

Material. The extractor material shall be aluminum alloy 6061, temper T6 as specified in [A-A-59832](#). The material
designator shall be a "1" as specified in [A-A-59832](#).

Finish. The finish designator shall be as specified in [A-A-59832](#). The finishes available for this CID specification
sheet are as follows: "A" (anodize) or "L" (low resistance chemical film).

Color. The color designator shall be as specified in [A-A-59832](#). The colors available for this CID specification sheet
are as follows: "B" (black) or "R" (red) for anodize finishes and "C" (clear) or "G" (gold) for low resistance chemical
film.

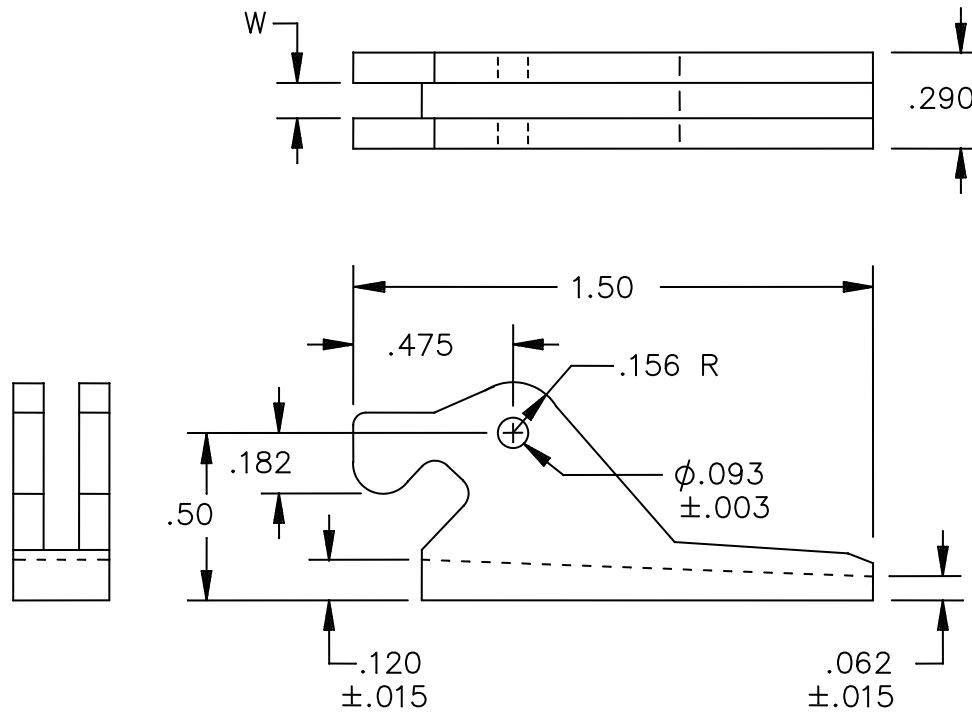
Roll pin. A stainless steel roll pin is furnished with each extractor. The roll pin is .09375 inch (2.38 mm) diameter by .3125 inch (7.9 mm) long.

TABLE I. Configurations and dimensions. ^{1/}

Configuration	Slot width designator	Slot width dimension "W" ^{2/} Inch (mm)	Accommodates printed board thickness Inch (mm)	Figure
S	F	.048 (1.22)	.032 (0.79)	1
S	S	.080 (2.03)	.063 (1.6)	
S	T	.110 (2.79)	.094 (2.4)	
S	E	.140 (3.56)	.125 (3.2)	
M	F	.048 (1.22)	.032 (0.79)	2
M	S	.080 (2.03)	.063 (1.6)	
M	T	.110 (2.79)	.094 (2.4)	
M	E	.140 (3.56)	.125 (3.2)	
L	F	.048 (1.22)	.032 (0.79)	3
L	S	.080 (2.03)	.063 (1.6)	
L	T	.110 (2.79)	.094 (2.4)	
L	E	.140 (3.56)	.125 (3.2)	

^{1/} Dimensions are in inches. Millimeters, in parenthesis, are given for general information only.

^{2/} Tolerance is +.010, −.000 inch (+0.25, −0.000 mm).

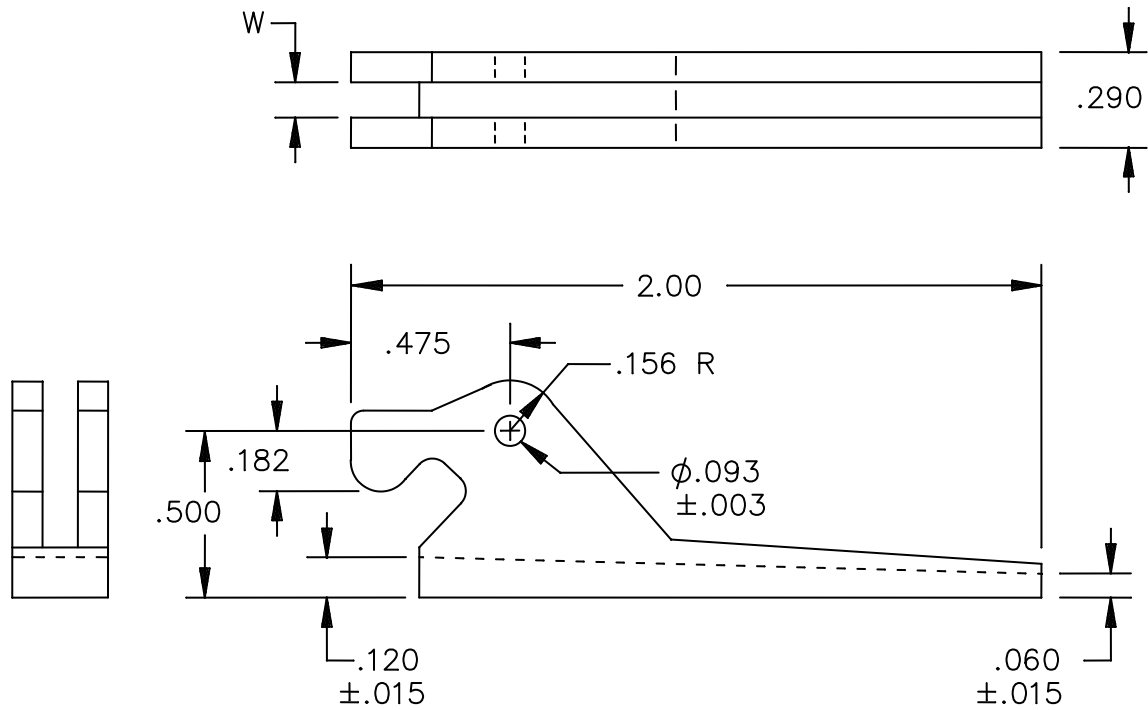


Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.07	.093	2.36	.182	4.62	.50	12.7
.015	0.38	.120	3.05	.290	7.37	1.50	38.1
.062	1.57	.156	3.96	.475	12.07		

NOTES:

1. Dimensions are in inches. Millimeter equivalents are given for general information only.
2. Unless otherwise specified, tolerances are ± 0.02 inch (0.51 mm) for two place decimals and ± 0.010 inch (0.25 mm) for three place decimals.

FIGURE 1. Configuration S dimensions (approximate mechanical advantage of 3.3:1).

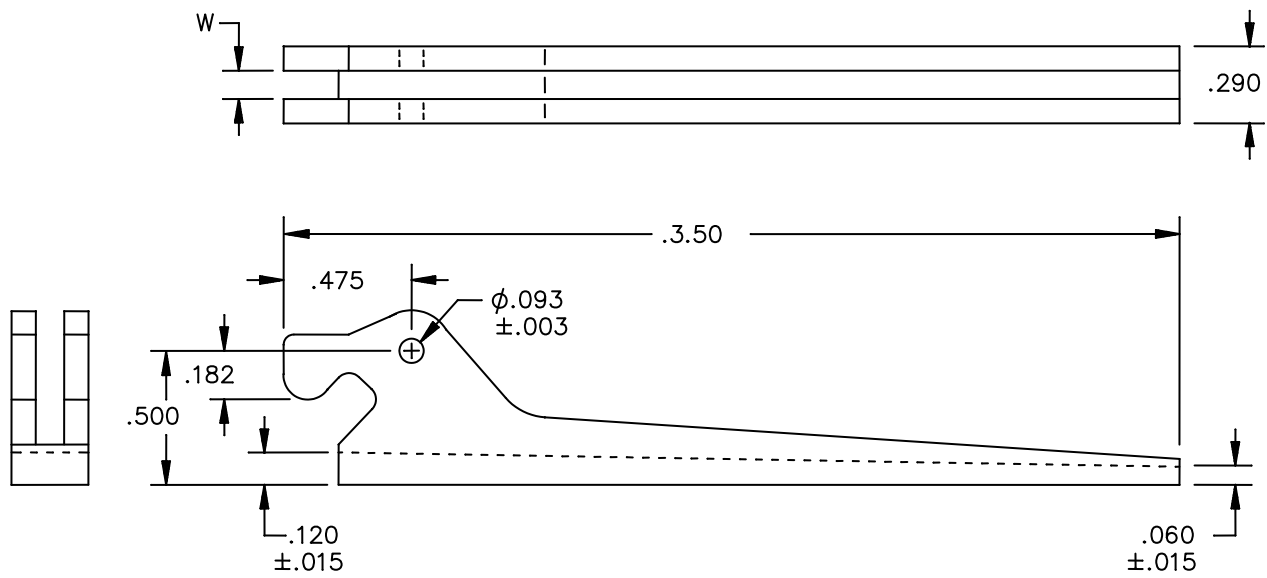


Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.07	.093	2.36	.182	4.62	.50	12.7
.015	0.38	.120	3.05	.290	7.37	2.00	50.8
.060	1.52	.156	3.96	.475	12.07		

NOTES:

1. Dimensions are in inches. Millimeter equivalents are given for general information only.
2. Unless otherwise specified, tolerances are ± 0.02 inch (0.51 mm) for two place decimals and ± 0.010 inch (0.25 mm) for three place decimals.

FIGURE 2. Configuration M dimensions (approximate mechanical advantage of 4.2:1).



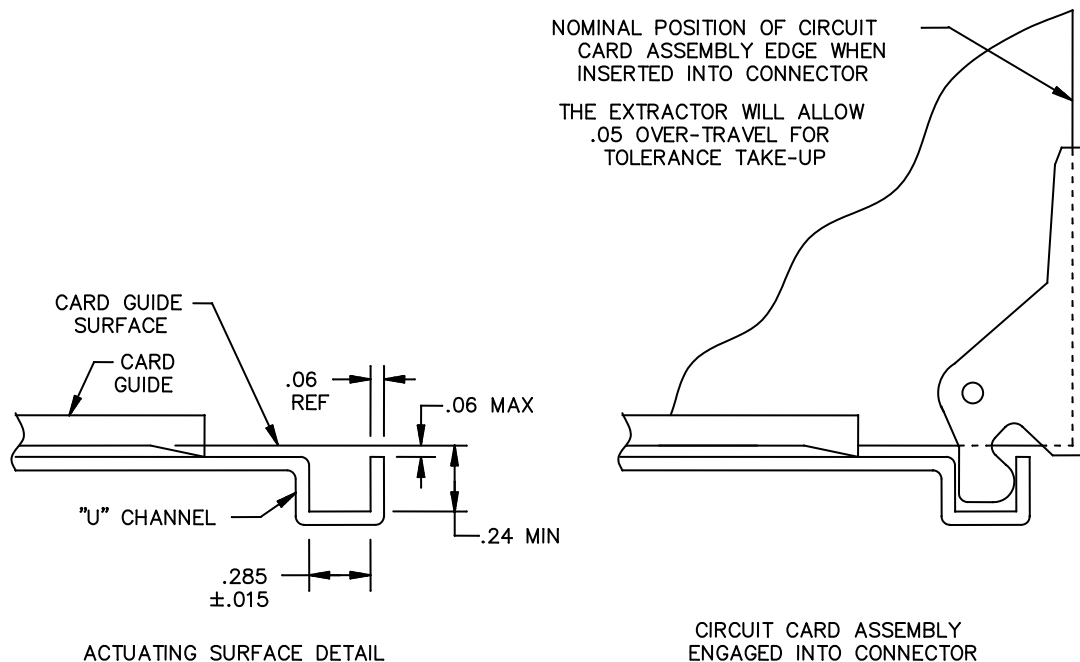
Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.07	.093	2.36	.182	4.62	.50	12.7
.015	0.38	.120	3.05	.290	7.37	3.50	88.9
.060	1.52	.156	3.96	.475	12.07		

- NOTES:
1. Dimensions are in inches. Millimeter equivalents are given for general information only.
 2. Unless otherwise specified, tolerances are ± 0.02 inch (0.51 mm) for two place decimals and ± 0.010 inch (0.25 mm) for three place decimals.

FIGURE 3. Configuration L dimensions (approximate mechanical advantage of 7:1).

APPLICATION DATA.

Card cage actuating surface. The nominal position of circuit card assembly edge to the "U" channel edge when seated in the connector is shown on figure 4. The extractor will allow .05 inch (1.3 mm) over travel for tolerance take-up. The circuit card assembly is ejected from its installed position by lever action of the ejector against the "U" channel of the card cage. A single ejector is recommended for circuit card assemblies up to 5 inches (127 mm) in width. For circuit card assemblies over 5 inches (127 mm) in width, or when using an electrical connector(s) with more than 100 contacts, two ejectors mounted on each circuit card assembly is recommended.



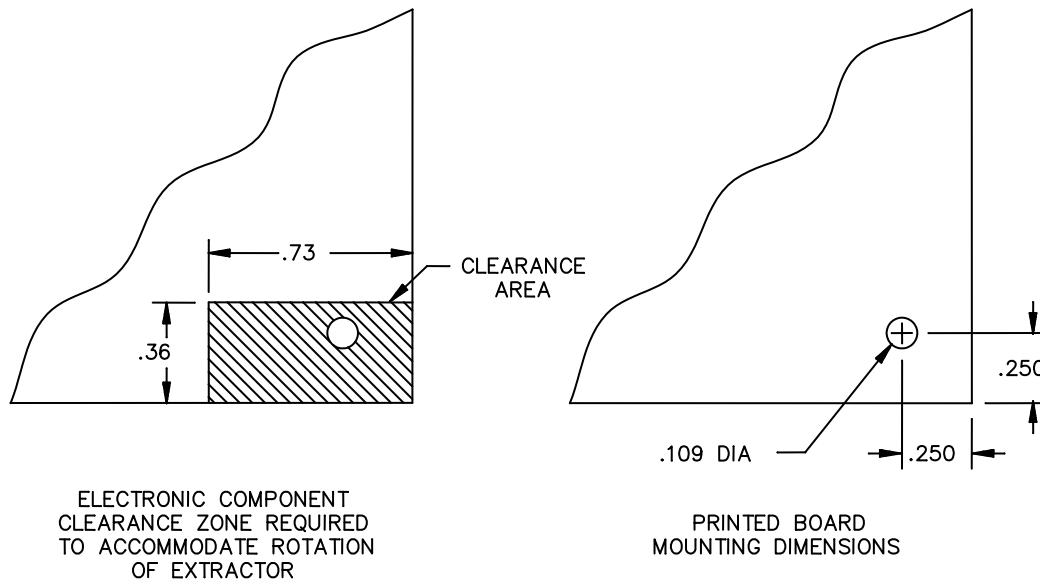
Inches	mm	Inches	mm	Inches	mm	Inches	mm
.015	0.38	.05	1.3	.24	6.1	.50	12.7
		.06	1.5	.285	7.24	1.50	38.1

NOTES:

1. Dimensions are in inches. Millimeter equivalents are given for general information only.
2. Unless otherwise specified, tolerances are ± 0.02 inch (0.51 mm) for two place decimals and ± 0.010 inch (0.25 mm) for three place decimals.

FIGURE 4. Circuit card assembly to card cage dimensions.

Circuit card assembly printed board. The circuit card assembly should be designed so that electronic components in the area around the ejector mounting hole have sufficient clearance for ejector rotation as shown on figure 5.



Inches	mm	Inches	mm	Inches	mm	Inches	mm
.109	2.77	.250	6.35	.36	9.14	.73	18.5

NOTES:

1. Dimensions are in inches. Millimeter equivalents are given for general information only.
2. Unless otherwise specified, tolerances are ± 0.02 inch (0.51 mm) for two place decimals and ± 0.010 inch (0.25 mm) for three place decimals.

FIGURE 5. Printed board clearance zone and mounting hole dimensions.

NOTES.

PIN. The PIN should be used for Government purposes to buy commercial products to this CID specification sheet. See the classification section for PIN format example.

Source of documents.

Commercial Item Description

A-A-59832 – Extractor, Electrical Card, Metal, General Requirements For.

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

Ordering data. Ordering data is as specified in [A-A-59832](#).

Commercial products. As part of the market analysis and research effort, this CID specification sheet was coordinated with the following manufacturers of commercial products. At the time of CID specification sheet preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID specification sheet. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict procurement to only the manufacturers shown.)

<u>Manufacturer CAGE</u>	<u>Manufacturer name and address</u>	<u>Manufacturer contact information</u>
5BG68	Card Locks Unlimited, Inc. 2310 E. Orangethorpe Avenue Anaheim, CA 92806-1231	Telephone: (714) 738-6194 Facsimile: (714) 446-0119 E-mail: sales@clumfg.com URL: www.clumfg.com

Part number (P/N) supersession data. These CID specification sheet PINs supersede the following manufacturer's P/Ns as shown in table II. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE II. Commercial P/N supersession data.

PIN designator AA59832/02	Vendor similar designator or type part number <u>1/</u> CAGE 5BG68	PIN designator AA59832/02	Vendor similar designator or type part number <u>1/</u> CAGE 5BG68
SF1AB	1511-BA	SF1LC	1511-CC
SS1AB	1512-BA	SS1LC	1512-CC
ST1AB	1513-BA	ST1LC	1513-CC
SE1AB	1514-BA	SE1LC	1514-CC
MF1AB	1501-BA	MF1LC	1501-CC
MS1AB	1502-BA	MS1LC	1502-CC
MT1AB	1503-BA	MT1LC	1503-CC
ME1AB	1504-BA	ME1LC	1504-CC
LF1AB	1551-BA	LF1LC	1551-CC
LS1AB	1552-BA	LS1LC	1552-CC
LT1AB	1553-BA	LT1LC	1553-CC
LE1AB	1554-BA	LE1LC	1554-CC
SF1AR	1511-RA	SF1LG	1511-CG
SS1AR	1512-RA	SS1LG	1512-CG
ST1AR	1513-RA	ST1LG	1513-CG
SE1AR	1514-RA	SE1LG	1514-CG

See footnote at end of table.

TABLE II. Commercial P/N supersession data – Continued.

PIN designator AA59832/02	Vendor similar designator or type part number <u>1/</u> CAGE 5BG68	PIN designator AA59832/02	Vendor similar designator or type part number <u>1/</u> CAGE 5BG68
MF1AR	1501-RA	MF1LG	1501-CG
MS1AR	1502-RA	MS1LG	1502-CG
MT1AR	1503-RA	MT1LG	1503-CG
ME1AR	1504-RA	ME1LG	1504-CG
LF1AR	1551-RA	LF1LG	1551-CG
LS1AR	1552-RA	LS1LG	1552-CG
LT1AR	1553-RA	LT1LG	1553-CG
LE1AR	1554-RA	LE1LG	1554-CG

1/ The manufacturer's P/N shall not be used for procurement to the requirements of this CID specification sheet. At the time of preparation of this CID specification sheet, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements, see the marking paragraph in [A-A-59832](#).

MILITARY INTERESTS:

Custodians:

Army – CR
Navy – EC
Air Force – 85
DLA – CC

Review Activity:

Air Force – 99

CIVIL AGENCY COORDINATING ACTIVITY:

GSA – FSS

Preparing Activity:
DLA – CC

Project 5998-2008-024

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.